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| 10/031,686      | 01/22/2002  | Norbert Ehmer        | AP9671              | 6213             |

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EXAMINER

NGUYEN, THU V

ART UNIT PAPER NUMBER

3661

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/031,686

Applicant(s)

EHMER ET AL.

Examiner

Thu Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

The preliminary amendment filed on January 22, 2002 has been entered. By this amendment, claims 1-15 have been canceled, claims 16-30 have been added and claims 16-30 are now pending in the application. The substitute specification is entered and the three sheets of drawing are accepted by the examiner.

#### ***Claim Objections***

1. Claims 26 is objected to because of the following informalities:

In claim 26, the “(EDS)” should be corrected to “ESP” to correspond with the disclosure in the specification paragraph [0002].

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 19, 24, and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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- a. In claim 19, lines 6-7, the claimed format “30msec.(T2) to 150msec.(T1)” is ambiguous. It is not clear if the limitation means “30msec multiplied by T2”, and “150ms multiplied by T1”? What are the value of T1 and T2?
- b. In claim 19, line 6, the claimed “a limit value for the period of about 50msec.” is ambiguous. It is not clear if the 50msec implies the specific value for the “specified limit value” in line 5? Further, the “.” after msec should be deleted.
- c. Similar rejection for the limitations “0 km/h (S2) to 50km/h (S1)” in claim 21, lines 4-5, Is it “0km/h multiplied by S2”, and “50km/h multiplied by S1”. What are the value for (S2) and (S1)?
- d. In claim 24, line 4, the claimed “on both wheels of one side of the vehicle” is ambiguous. It is not clear what should be on both wheels of one side of the vehicle. Does the limitation means “the conditions for a gravel road were identified on both wheels”?, further it is not clear how we use the wheels to identified the road condition.
- e. In claim 24, line 4, the alternative “and/or” is ambiguous. It is not clear if the limitation should be interpreted as “and” or “or”.
- f. In claim 30, line 2, the claimed ”which” is ambiguous. It is not clear if it is the “calculating circuit” or if it is the “identification circuit” the claimed “which” refers to.
- g. In claim 30, line 3, similar rejection on the relative term “whose”.
- h. In claim 30, line 3, the claimed “measured values” is ambiguous, It is not clear what should be the measured values. What circuit outputs the “measured values”?

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- i. In claim 30, line 7, the claimed “that” is ambiguous. The connection of the sentence followed the “that” with the previous limitations is unclear.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 16-21, 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janssen et al (DE 197 05 948) in view of Monzaki (US 5,570,935).

As per claim 16, Janssen teaches a method for controlling a vehicle including the steps of: detecting and evaluating the vibration behavior of the individual wheels on the driven axle (page 3, lines 12-19); detecting and evaluating vehicle acceleration (page 3, lines 28-30); activating a control function when the vibration and the wheel acceleration both exceed an associated threshold value (page 3, lines 12-36; page 4, lines 1-8). Janssen does not teach detecting and evaluating the wheel acceleration. However, Janssen teaches determining the vehicle acceleration (page 3, lines 28-30), it would have been known that the vehicle acceleration is determined from the wheel acceleration, further, Monzaki teaches detecting the wheel acceleration (col.17, lines 25-31). It would have been obvious to a person of ordinary skill in the

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art at the time the invention was made to include determining the wheel acceleration to the system of Janssen in order to use the data from the data measured directly from the sensor and to facilitate determining the road surface condition.

As per claim 17, Monzaki teaches activating a control function when the period of a vibration of the driven wheels is within a specified range (page 3, lines 13-17).

As per claim 18-19, determining a specific limit range as a result of a general known measurement in experimentation on the threshold of acceleration or period range on which slipping occurs requires only routine skill in the art.

As per claim 20-21, exerting a control function when the driven wheel exhibit a specific traction slip would have been well known. Further, determining a specific limit range as a result of a general known measurement in experimentation on the threshold of the traction slip requires only routine skill in the art.

As per claim 24-25, activating a control when a gravel road were identified in a all-wheel drive vehicle or one driven axle vehicle would have been well known.

As per claim 26, Monzaki teaches an anti-lock system (col.1, lines 5-9; col.3, lines 9-27).

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As per claim 27, and setting brake control threshold in the range of 0-10km.h (col.7, lines 63-67; col.8, lines 1-2)

As per claim 28, refer to claims 16 and 27 above.

6. Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janssen et al (DE 197 05 948) in view of Monzaki (US 5,570,935) and further in view of Saeki et al (US 5,748,503).

As per claim 22-23, Saeki teaches activating a control function in respond to the vehicle reference value (col.33, lines 65-67; col.34, lines 1-7, lines 56-61), further, comparing the reference vehicle speed with a predetermined threshold to determine if traction control, or antilocking brake should be activated would have been well known. Moreover, determining a specific limit range as a result of a general known measurement in experimentation on the threshold of the traction slip requires only routine skill in the art.

7. Claims 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (JP 10-29519).

As per claim 29, Matsuda teaches a circuit arrangement for controlling a vehicle using anti-lock system. The circuit comprises: an identification circuit (para 0009); a detection circuit for detecting the vibration behavior of a wheel, the output of the detection circuit is integrated

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and the road condition is detected (abstract; para 0013-0014). Matsuda does not explicitly teach detecting the vibration behavior of individual wheels and integrating a quantity over a period of time. However, Matsuda teaches detecting the vibration of a wheel (abstract), further detecting vibration of each individual wheels, and integrating a signal over a predetermined period of time would have been well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to detect the vibration of each wheel and selecting a predetermined period of time to integrate the vibration values taught by Matsuda in order to facilitate determining rough road caused by split road or gravel road.

8. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (JP 10-29519) in view of Janssen et al (DE 197 05 948) and further in view of Saeki et al (US 5,748,503) and Monzaki (US 5,570,935).

As per claim 30, refer to claim 16 and 22 above. Further, comparing the traction slip of the wheels with a limit value to determine activation of traction control would have been well known.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**



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(703) 305-7687, (for formal communications intended for entry)

**Or:**

(703) 305-7687 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park V, 2451 Crystal Drive,  
Arlington. VA., Seventh Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Nguyen whose telephone number is (703) 306-9130. The examiner can normally be reached on Monday-Thursday from 8:00 am to 6:00 pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski, can be reached on (703) 308-3873. The fax phone number for this Group is (703)305-7687 .

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)308-1111.



Thu Nguyen

September 25, 2003